FIG.1

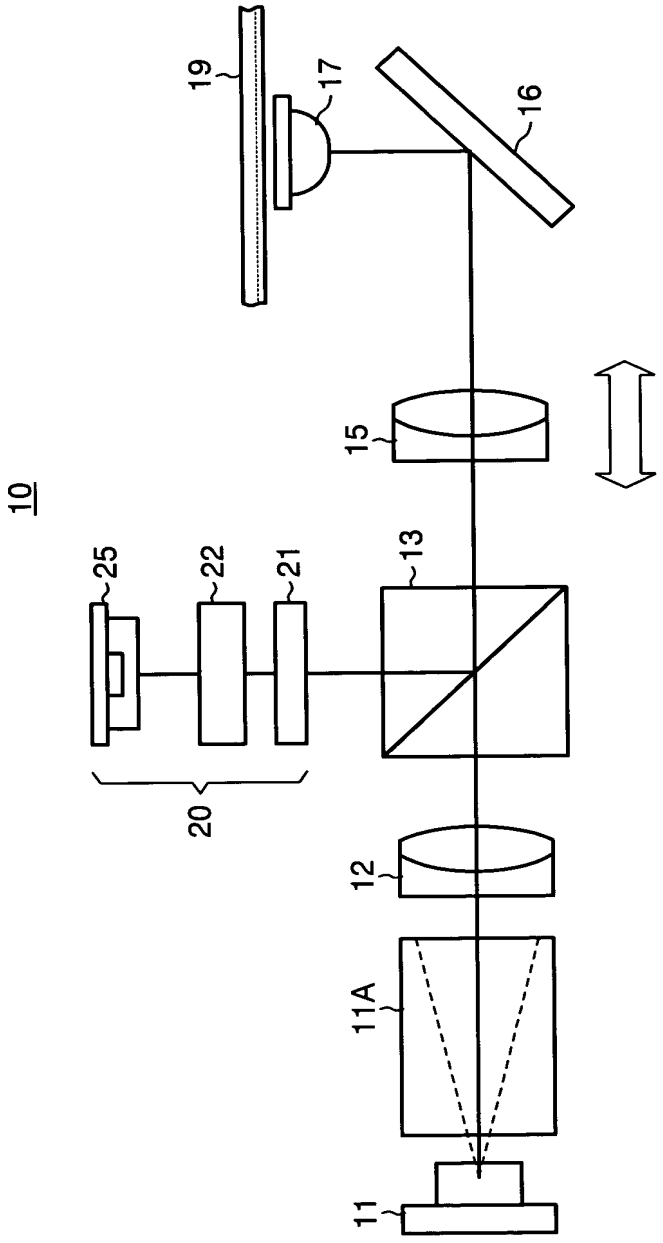


FIG.2

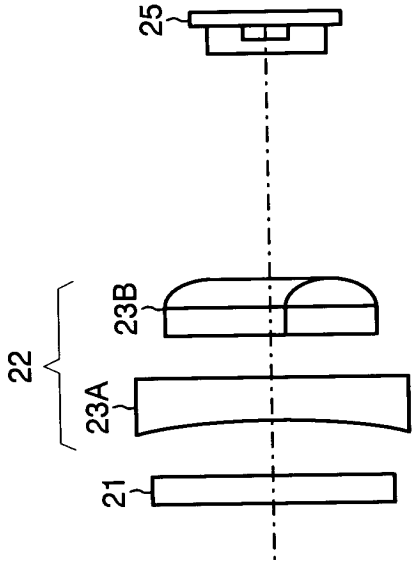


FIG.3

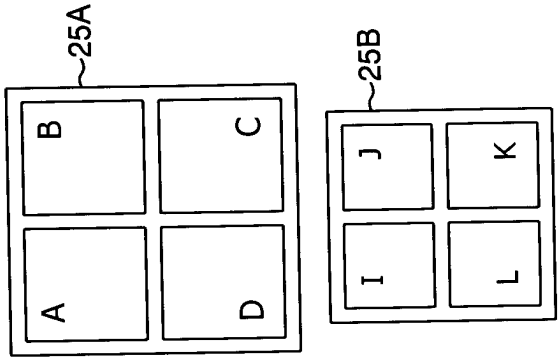


FIG.4

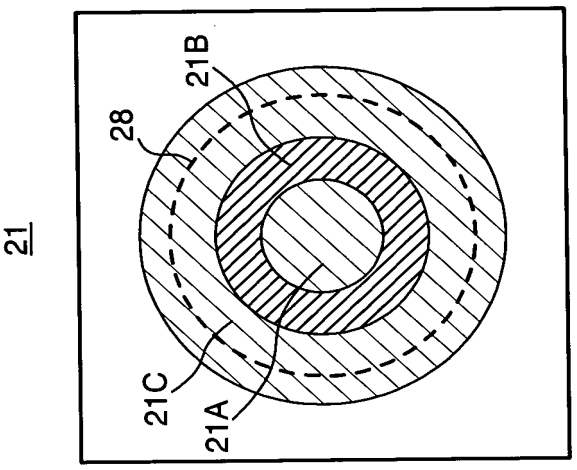


FIG.5

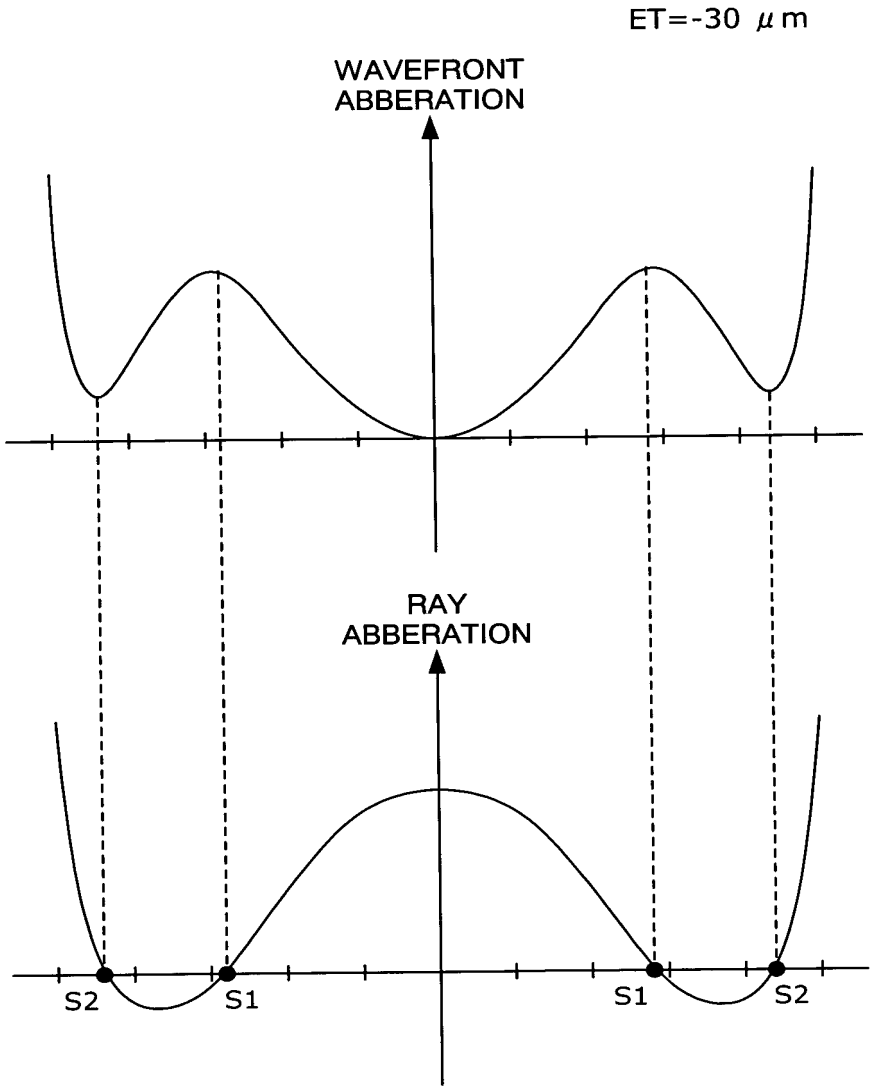


FIG.6

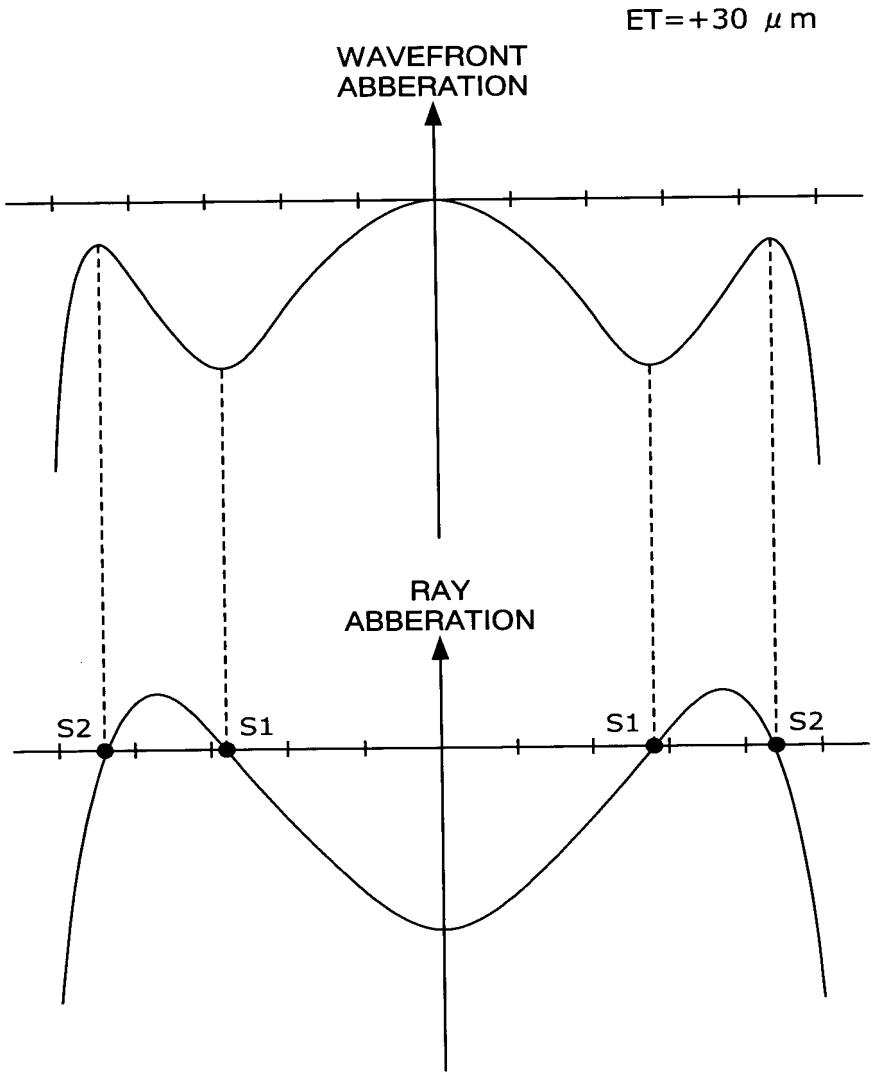


FIG.7

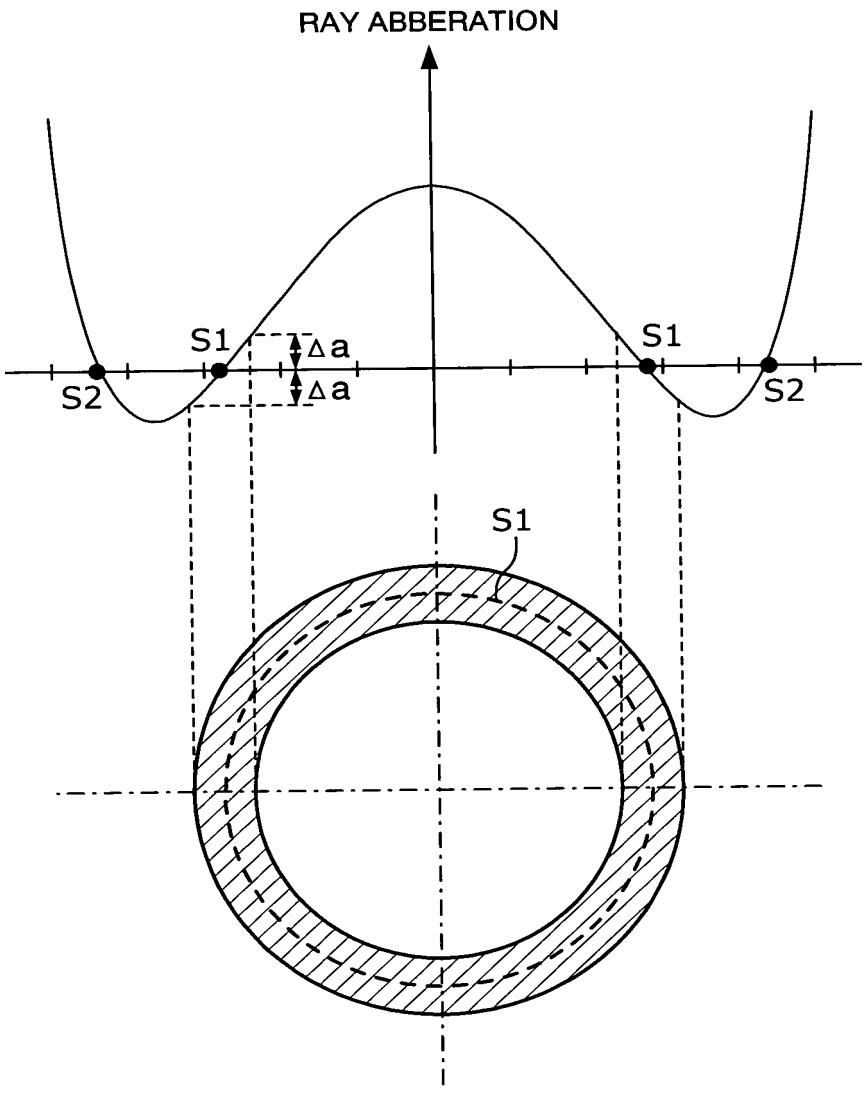


FIG.8

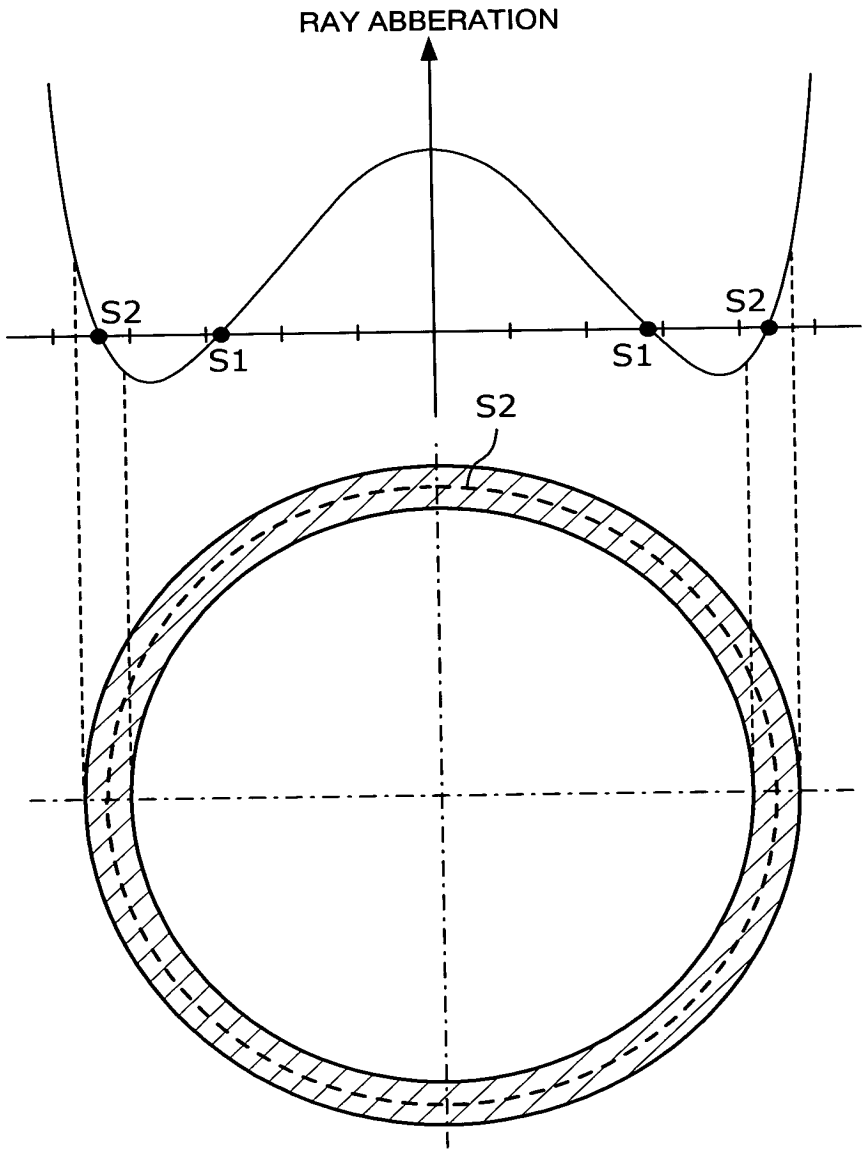


FIG.9

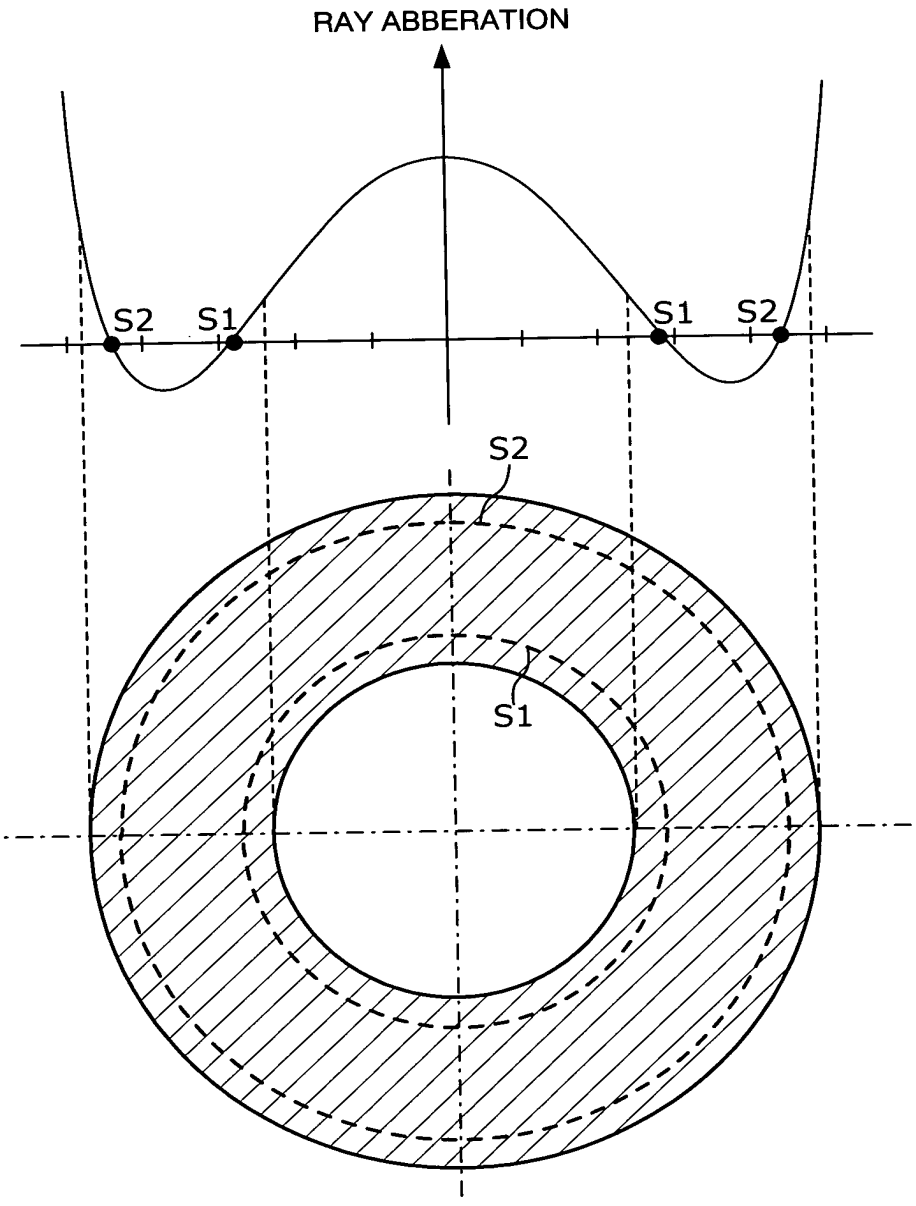


FIG.10

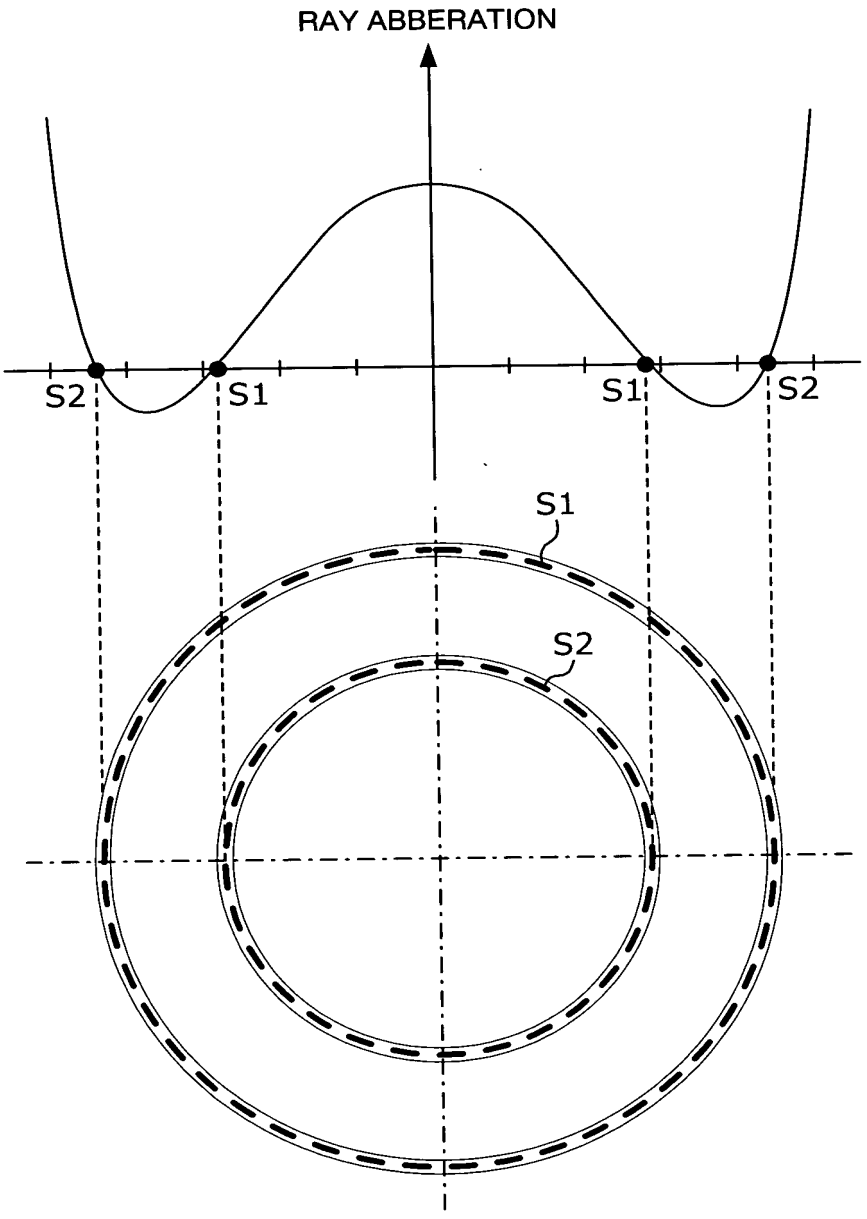


FIG.11

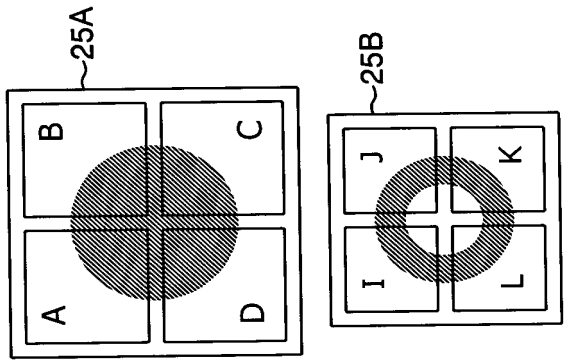


FIG.12

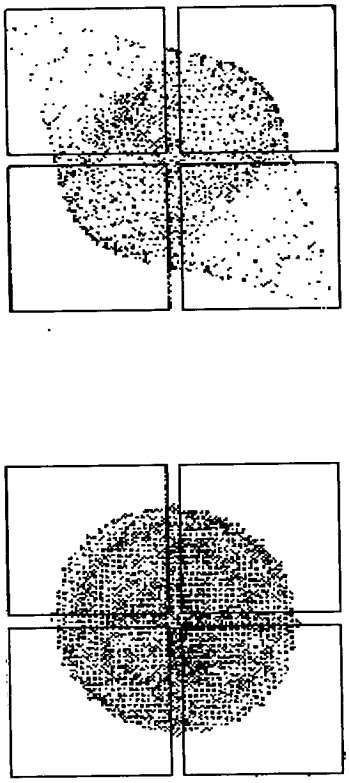
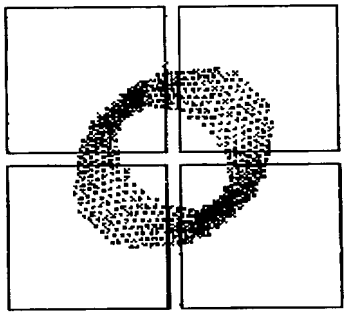
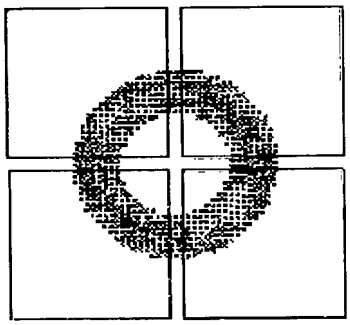


FIG.13



TC=120 μm



TC=100 μm

FIG.14

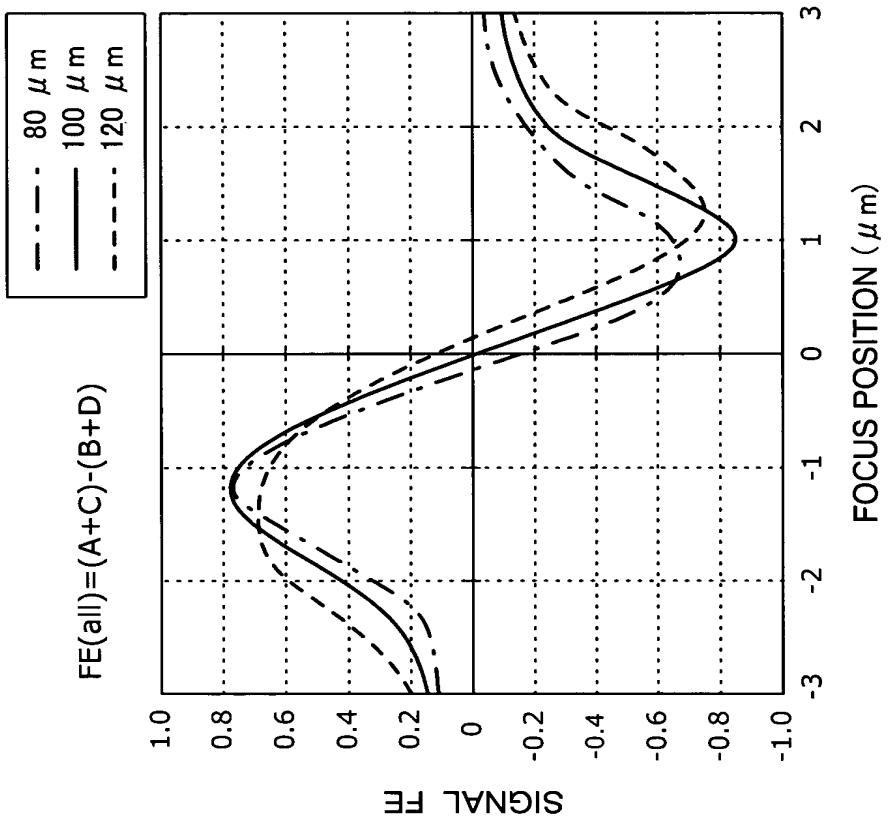

80 μm
100 μm
120 μm
FE(all)=(A+C)-(B+D)
SIGNAL FE
1.0
0.8
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
-0.8
-1.0
3
2
1
0
-1
-2
-3
FOCUS POSITION (μm)

FIG.15

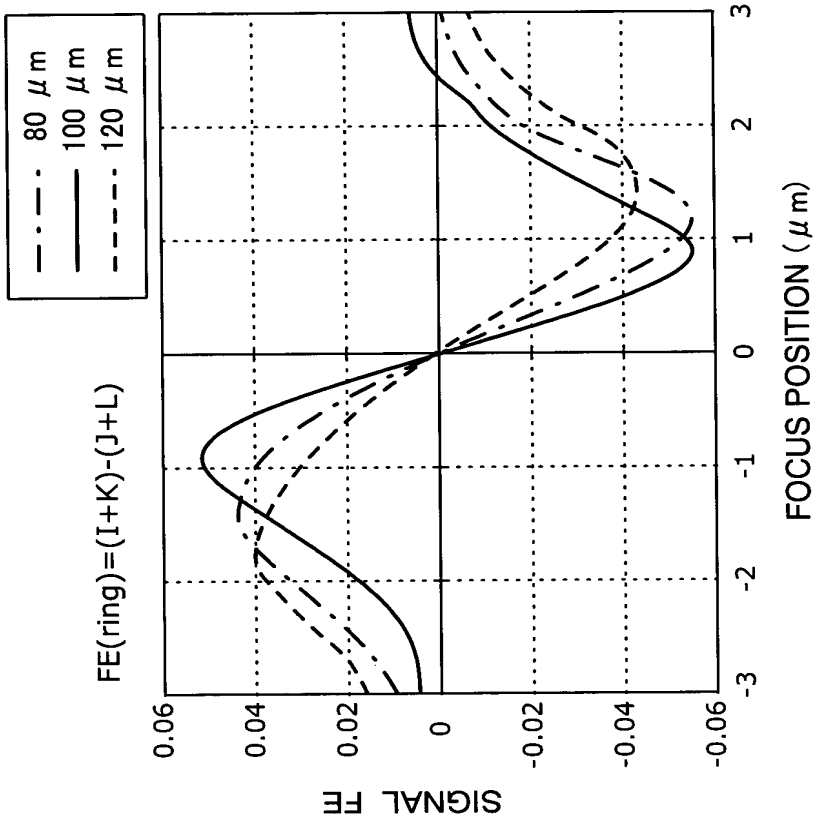
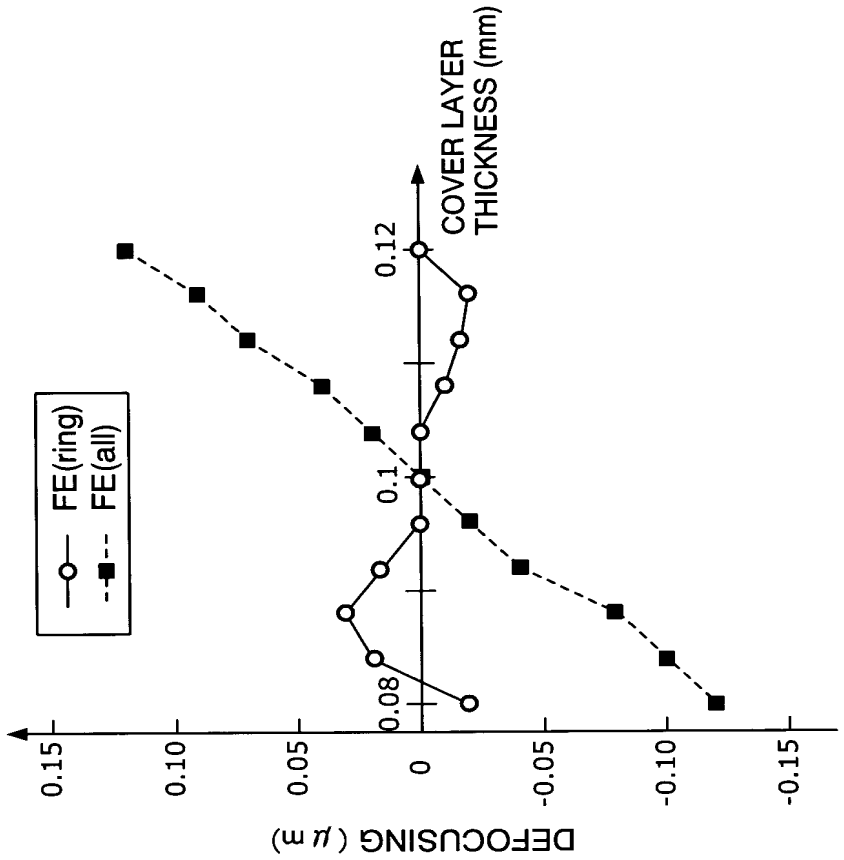

80 μm
100 μm
120 μm
FE(ring)=(I+K)-(J+L)
SIGNAL FE
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
3
2
1
0
-1
-2
-3
FOCUS POSITION (μm)

FIG.16


FE(ring)
FE(all)
COVER LAYER THICKNESS (mm)
0.12
0.1
0.08
DEFOCUSING (μm)
0.15
0.10
0.05
0
-0.05
-0.10
-0.15